

Remarks

Claims 1-16 and 21-24 are pending in the application. Claims 1-16 and 23 are rejected, and claims 21, 22 and 24 are objected to. By this paper, claims 25-27 are added. Based on the following, consideration of the new claims, and reconsideration of the remaining claims, are requested.

Claim Rejections—35 U.S.C. § 102

The Examiner rejected claim 23 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2002/0019687 (Suzuki et al.). The Examiner states that Suzuki et al. teaches a method for operating a vehicle that includes "a routine for stopping the engine responsive to a plurality of conditions ... including a condition associated with the control of the system (paragraph 0038) based on a vehicle speed (paragraph 0038, lines 1-4, in conjunction with figure 3), whereupon when at least a vehicle speed falls into a predetermined range (see figure 3) the engine standby mode is enabled (paragraph 0038, lines 3-4)."

If, for the sake of argument, Applicants adopt the Examiner's interpretation of Suzuki et al. set forth above, there is still no presentation of how each and every element of claim 23 is either expressly or inherently described in this reference. For example, claim 23 recites not only the step of "determining whether at least one vehicle system controller condition matches a corresponding predetermined vehicle system controller condition," but also "determining whether at least one engine condition matches a corresponding predetermined engine condition." In Paragraph 0038 of Suzuki et al. there is a description of stopping the engine "when a prescribed stopping condition is satisfied," (line 3). The particular conditions used for engine stopping are also described, they are "[w]hen the vehicle speed and accelerator opening correspond to the motor-generator driving region," (lines 1-2). These criteria are set forth graphically in Figure 3, which illustrates a "vehicle speed" versus "accelerator opening" curve, delineating a motor generator driving region and an engine driving region.

As fully described in the specification of the present application, Applicant's invention examines a number of criteria from a variety of different vehicle systems, including an engine condition, not just a vehicle condition such as vehicle speed or accelerator pedal position. In this way, the method for enabling engine standby is more robust, and not prone to stopping the engine under undesirable conditions. As described in Suzuki et al. in Paragraph 0038, and illustrated in Figure 3, only the relationship between vehicle speed and accelerator opening is examined to determine if the engine should be stopped. Therefore, Applicants respectfully submit that with regard to Suzuki et al., and claim 23 of the present application, the MPEP requirements for establishing a *prima facie* case of anticipation have not been met.

Claim Rejections—35 U.S.C. § 103

The Examiner rejected claims 1-8, 11 and 14-16 under 35 U.S.C. § 103(a) as being unpatentable over Suzuki et al. The Examiner states that "Suzuki et al. teach a method for operating a hybrid vehicle with an engine (1) and an electric motor (2) and including a plurality of conditions which cause the engine (1) to be stopped or placed into a stopped standby condition, including: an engine condition (paragraph 0036, lines 7-9)" Applicants respectfully disagree with the Examiner's interpretation of Suzuki et al. For example, lines 7-9 of Paragraph 0036 of Suzuki et al. state that "[i]n a low load region having poor engine efficiency, the engine 1 is stopped, and the vehicle runs with the torque of the motor generator 2." For an explanation of what constitutes a "low load region", Suzuki et al. continues in Paragraph 0037. First, Figure 3 is referenced. As discussed above, this figure merely illustrates a vehicle speed - accelerator pedal position curve; there is nothing regarding "comparing at least one engine condition to a corresponding predetermined engine condition," or "determining whether at least one engine condition matches a predetermined engine condition," as respectively recited in claims 1 and 11 of the present application.

The determination of the "low load" region is further described in Suzuki et al.: "the motor-generator driving region is defined to correspond to a relatively light load state

(i.e., the state where the use of the engine 1 as a driving power source would degrade the fuel efficiency) as in starting the vehicle." (Paragraph 0037, lines 8-11.) This is followed, in Paragraph 0038, by the statement that "[w]hen the vehicle speed and accelerator opening correspond to the motor-generator driving region ... the engine 1 is automatically stopped." Examining vehicle speed and accelerator opening as criteria for stopping an engine does not inherently teach *also* examining an engine condition and comparing it to a predetermined engine condition. The present invention as recited in claims 1 and 11 examine a number of criteria, including an engine condition, and compare each to a corresponding predetermined condition. Such a method provides advantages over methods making only some of these determinations. Therefore, Applicants respectfully submit that neither claim 1 nor claim 11 is rendered obvious by Suzuki et al.

Claim 1 is the base claim for claims 2-8, and claim 11 is the base claim for claims 14-16. Each of these dependent claims contains all of the limitations of its respective base claim, as well as additional limitations which further distinguish it from the cited reference. Therefore, based on the foregoing, Applicants maintain that each of claims 1-8, 11 and 14-16 contain limitations which are neither taught nor suggested by Suzuki et al., and respectfully submit that with regard to these claims, the requirements for establishing a *prima facie* case of obviousness have not been met.

The Examiner rejected claims 9, 10, 12 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Suzuki et al. in view of U.S. Patent No. 6,176,807 (Oba et al.). The Examiner states that it would have been obvious "to include a motor and transmission condition determination step as suggested by Oba et al. with the vehicle control arrangement of Suzuki et al., for the purpose of preventing the use of the engine in operating regions where the engine efficiency is degraded." The Examiner then references steps S52 and S51 in Oba et al. as respectively teaching a determination of an operating condition of a motor and a transmission. Although claims 9, 10, 12 and 13 expressly recite the use of transmission and motor conditions, each of these dependent claims also contains all of the limitations of its respective base claim. The combination of Suzuki et al. and Oba et al. does not teach, or even suggest,

all of the limitations of base claims 1 and 11, and therefore, Applicants maintain that the combination also does not render obvious any of the dependent claims so rejected.

New Claims

By this paper, new claims 25-27 are added. Each of these new claims is directed to the elected invention, and depends from a previously entered claim. Applicants submit that none of the new claims are anticipated or rendered obvious by the cited references. For example, claim 25 depends from claim 23, which, as discussed above, is believed to be patentable over the cited references. In addition, claim 25 further includes the limitation that engine standby is enabled "only when at least the at least one engine condition matches a corresponding predetermined engine condition and the at least one vehicle system controller condition matches a corresponding predetermined vehicle system controller condition." As discussed above, Suzuki et al. fails to expressly or inherently describe the step of "determining whether at least one engine condition matches a corresponding predetermined condition," and therefore cannot then be said to describe using that determination (which was not made) to allow the engine standby condition.

Similarly, claims 26 and 27 utilize elements of their respective base claims to further the method of the present invention. Because elements of their base claims are not taught or suggested by the Suzuki et al. - Obi et al. combination, use of those elements, as recited in claims 26 and 27, also cannot be taught or suggested.

Allowable Subject Matter

The Examiner objected to claims 21, 22 and 24 as being dependent upon rejected base claims, but indicated that each would be allowable if rewritten in independent form to include all of the limitations of its respective base claim and any intervening claims. As discussed in detail above, each of the base claims for these objected-to claims is believed to be allowable; therefore, withdrawal of these objections is requested.

Applicants have carefully considered the Examiner's remarks in the "Response to Comments" section, and have diligently attempted to address the specific rejections, including the point citations in the references. The differences between the references and the invention as claimed have been duly set forth, and Applicants believe that each of the claims is patentable over the cited references. Accordingly, allowance of each of the pending claims is requested.

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Respectfully submitted,

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